

ABSTRACT OF THE DISCLOSURE

A radio-frequency amplifier is provided. The radio-frequency amplifier includes a transistor having an input terminal, an output terminal, a control terminal, and a transconductance g_m . A series-connected feed-through resistance R_f and feed-through capacitance C_f is connected in parallel with the input terminal and the output terminal of the transistor. A load resistance R_L is connected to the output terminal. The control terminal of the transistor is biased at a fixed voltage. Part of the transistor noise follows the looped path through the feed-through resistor instead of passing on to the load, which reduces the noise figure of the amplifier. The value of g_m , R_f and R_L are chosen in a way to keep the input impedance of the amplifier matched to a well-defined signal source impedance.

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